

REMARKS

In the Office Action dated June 30, 2006, claim 8 was rejected under 35 U.S.C. §112, second paragraph, because of a typographical error regarding the dependency of claim 8, which has now been corrected.

The Examiner further stated that should claim 8 be amended to depend from claim 1, claim 8 would be objected to under Section 112, fourth paragraph because the Examiner stated this would remove the limitation of "at least one rotation" that is present in independent claim 1.

To avoid such an objection, claim 8 has been additionally amended to state that the test images are acquired during only a partial location of the focus around the organ, compared to the previous language stating that the data were acquired *with* only a partial rotation. Applicants submit that claim 8 does not contradict claim 1, and thus does not remove any limitation from claim 1. This is because, as explained in Applicants previously-submitted Appeal Brief, claim 1 states that a plurality of sets of projection data are acquired "during at least one rotation of said focus around said organ." This phrase does not state, nor require, that the sets of projection data be acquired during *an entirety* of at least one rotation of the focus around the organ, but intentionally was drafted to generically encompass not only that possibility, but also the possibility that is set forth in claim 8. Even if the projection data are acquired, as in claim 8, during only a portion of one rotation, the data are still being acquired "during at least one rotation" and therefore there is nothing contradictory between claim 8 and claim 1.

Claim 8 is therefore submitted to be in full compliance with all provisions of Section 112, second paragraph and fourth paragraph.

Claims 1, 2, 4-8 and 10-18 were rejected under 35 U.S.C. §102(b) as being anticipated by Flohr et al '487. This rejection is respectfully traversed for the following reasons. In the Flohr et al '487 reference, only gross movements of an entirety of the heart are analyzed to determine whether the heart itself is in a resting phase or a motion phase, and only data that were acquired when the overall heart was determined to be in a resting phase are used to reconstruct the image of the heart.

As explained at page 7 of the present specification, however, the method and apparatus disclosed and claimed in the present application are based on the recognition that such gross analysis of movement or non-movement of the entirety of the heart can still lead to images with motion artifacts. This is because different regions of the heart exhibit rest phases and motion phases at different times from each other. The Flohr et al '487 reference does not take these different regions of the heart, as the organ being imaged, into account, but only analyzes the entirety of the heart as to whether it is in a rest phase or a motion phase.

Even if this difference was recognized by the Examiner, the Examiner may still have believed rejection of the claims based on Flohr et al '487 was proper because of the use of the terminology in each of the independent claims regarding analyzing the sets of projection data to determine whether the projection data in each test image were acquired during arrest phase or during a movement phase of *at least one* of said regions of said organ. The Examiner may have considered the analysis of the entirety of the heart that is disclosed in the Flohr et al '487 reference as encompassing all of the regions of the heart, and thus being an analysis of "at least one of" those regions. Each of the independent claims, therefore, has been

amended to make clear that the regions in question are different regions of the organ, and that only one of the regions is analyzed to detect movement artifacts in that one region, and the image of the organ is then reconstructed using only data acquired during the rest phase of that one region. For the reasons discussed above, the Flohr et al '487 reference, by virtue of analyzing the entirety of the heart with regard to motion, does not disclose such individual analysis of regions.

Claim 2, depending from claim 1, states that the projection data are separately analyzed with regard to each of a plurality of the aforementioned regions, and a single image of the organ is reconstructed using only projection data acquired during the respective rest phase of each of the regions. Claim 2 does not contradict the aforementioned statement in claim 1 of analyzing only one of the regions, because in claim 2 the plurality of regions are separately analyzed and, in each analysis, only one region is analyzed at a time, to detect motion artifacts in that region.

Applicants acknowledge that the Flohr et al '487 reference does disclose, at column 11, in claim 13, "checking each of said plurality of test images for the presence of motion artifacts only for a selected region of interest in said test images." There is no disclosure or suggestion in the Flohr et al reference, however, that this region of interest is a region (i.e., only a portion) of the organ in question. The "region of interest" described at this portion of the Flohr et al '487 reference is clearly not the same as the "region" in the claims of the present application. This is because, as noted above, the claims have now been amended to explicitly refer to different regions, and since it is stated that the organ is comprised of a plurality of these regions, it is clear that none of those regions can encompass the entirety of

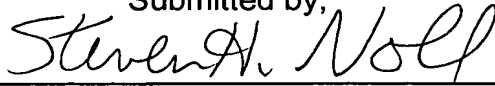
the organ itself, otherwise there could not be a "plurality" of such regions that comprise the organ.

When considered together with Figure 12, in combination with the text at column 7, line 65 through column 8, line 2 in the Flohr et al '487 reference, it is clear that the "region of interest" means a partial reconstructed image that contains the heart, but there are no different "regions of interest" within the heart. The only purpose of the "region of interest" disclosed in the Flohr et al '487 reference is to allow focusing of the investigation to a region of the overall interest that contains the organ in question, namely the heart, but there is no disclosure or suggestion anywhere in the Flohr et al '487 reference to analyze different regions *within* the heart with regard to motion.

The respective dependent claims depending from the aforementioned independent claims are not anticipated by Flohr et al '487 reference for the same reasons discussed above in connection with the independent claims.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,



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